

Work Order ID 142645

Friday, March 11, 2016 9:58:05 AM

646.9701
B142645
REV. D

142645

Page 1

Item ID: 646.9701 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Cutter Sub Assembly
 Start Date: 3/21/2016 Start Qty: 3.00 ***3*** Cust Item ID:
 Required Date: 3/31/2016 Req'd Qty: 3.00 ***3*** Customer:
 Reference:

Approvals: Process Plan: MCS Date: MAR 11 2016 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
646.9700	REV D								
110	Pick Kit	0.00							
110									
Packaging	Memo	0.00							
Packaging									
120		0.00							
120									
Small Fab	Memo	0.01							
Small Fab	Assemble as per dwg and apply loctite 598 on all faying surfaces per note.								
	A/R RTV LOCTITE 598: <u>M134260</u>								
	exp. date: <u>07/17</u>								
130	QC5- Inspect part-completeness to step on W/O	0.00							
130									
QC	Memo	0.00							
Quality Control									

DAS
36
9-89

DAS
36
9-89

DAS
36
9-89

MAR 18 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QS1042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QS1042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Picklist Print

Friday, March 11, 2016 9:58:04 AM

Page 1

Work Order ID: 142645

142645

Parent Item: 646.9701

646 9701

Parent Item Name: Cutter Sub Assembly

Start Date: 3/21/2016

Required Date: 3/31/2016

Start Qty: 3.00

Required Qty: 3.00

Comments: IPP REV:A 12.08.13 NEW ISSUE DD VERF:JFS
:B AS PER REV D 16-03-07 JLM VERIFIED BY:JFS

IPP REV

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
646.9710 *646 9710* Body		Manufactured	No				Each	6.0000		3		16/03/15	DAS 36 9-89
				<u>Location</u>				<u>Loc Qty</u>					
				CCK013				6		3			
				128805				3					
				130854				3					
646.9711 *646 9711* Blade		Manufactured	No			110	Each	38.0000	2	6		16/03/15	DAS 36 9-89
				<u>Location</u>				<u>Loc Qty</u>					
				CCK108A				38					
				136098				20		6			
				138180				18					
MS27039-08-19 *MS27039-08-19* Screw		Purchased	No			110	Each	1,040.000	6	18		16/03/15	DAS 36 9-89
				<u>Location</u>				<u>Loc Qty</u>					
				CCK06				200					
				m134142				200					
				GA				677					
				m132930				84					
				m133077				22					
				m134063				571		18			
				over006				100					
				m134294				100					
				ST277				63					
				m133769				63					

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____							
Misidentified	☐	Past Due	☐								

Picklist Print

Friday, March 11, 2016 9:58:04 AM

Page 2

Work Order ID: 142645

142645

Parent Item: 646.9701

646.9701

Parent Item Name: Cutter Sub Assembly

Start Date: 3/21/2016

Required Date: 3/31/2016

Start Qty: 3.00

Required Qty: 3.00

NAS1149FN832P

Purchased

No

110

Each

3,671.000

12

36

NAS1149FN832P

Washer

16/03/15

68-6
96
DAS

Location

Loc Qty

Loc Code

GA	1361
M133316	16
M133769	1345
ST260a	1200
M134257	1200
ST262	1110
M133709	1110

<i>36</i>

MS21042L08

Purchased

No

110

Each

1,645.000

6

18

MS21042L08

Nut

16/03/15

68-6
96
DAS

Location

Loc Qty

Loc Code

CA	101
m129682	101
GA	161
m133134	3
m134063	158
OVER007	500
m134063	500
ST303	483
m133922	483
ST308	400
m134376	400

<i>18</i>

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QS1042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

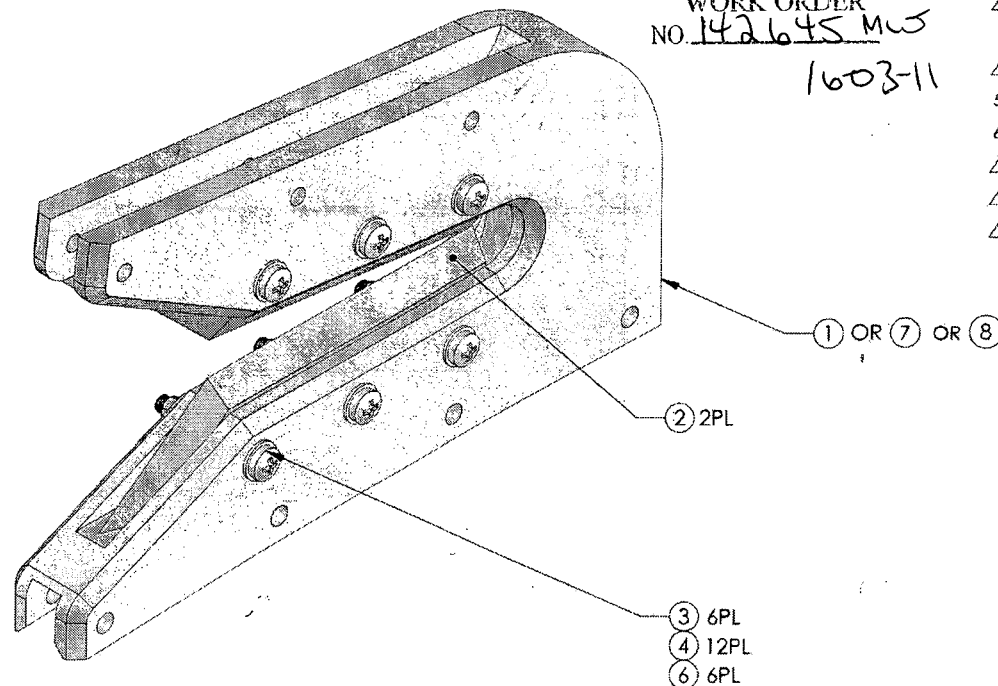
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APCAL INDUSTRIES DSA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APCAL INDUSTRIES DSA DART AEROSPACE IS PROHIBITED.

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 142645 MWS
1603-11

REVISIONS		
REV.	DESCRIPTION	DATE
1	LAST PROTOTYPE REVISION: PMS	
2	INITIAL RELEASE	03/19/91
3	INCORPORATED ECH 02744, 03380, 03712	04/04/91
4	INCORPORATED ECH 02747	07/03/91
5	INCORPORATED ECH 02749	08/09/91
6	INCORPORATED ECH 03374	02/26/92

NOTES:

- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12
- 2 FINISH IAW MPP-172 SECTION 3.3 & 4.3.
- 3 MATERIAL: AISI A2 TOOL STEEL
CONDITION: ANNEALED
POST PROCESS: HEAT TREAT TO 58-62 Rc ROCKWELL HARDNESS
- 4 FINISH: PRIME IAW MPP-172 SECTION 3.3: 1-2 MIL MAX
5. DEBURR AND BREAK ALL SHARP EDGES EXCEPT WHERE OTHERWISE NOTED
6. IDENTIFY IAW MPP-120
- 7 APPLY F/N 5 AS REQUIRED TO ALL FAYING SURFACES OF F/N 2 UPON ASSEMBLY
- 8 CUTTING EDGE INTENDED TO BE SHARP, DO NOT BREAK SHARP EDGE
- 9 ALL DIMENSIONS NOT SPECIFIED ARE CONTROLLED BY 646.9710.

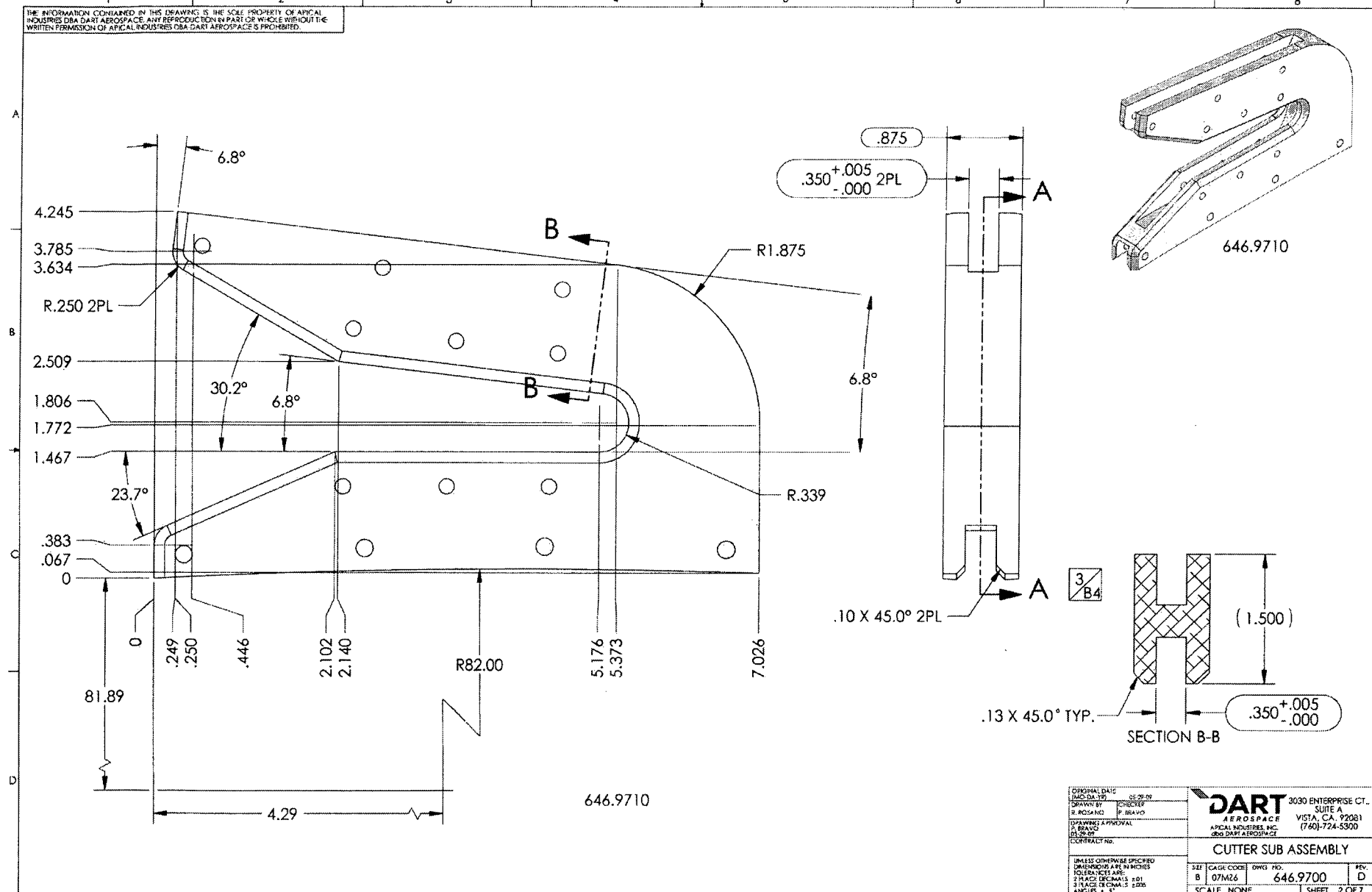


646.9701 SHOWN
646.9702 & 646.9703 TYP

1			8	646.9713	BODY			
	1		7	646.9712	BODY			
6	6	6	6	601.1541	LOCKNUT	MS21042L08		
A/R	A/R	A/R	5	601.2045	RIV. LOCITE 598			
12	12	12	4	601.2764	WASHER	MS21491M22P		
6	6	6	3	601.2765	SCREW	MS27039-0619		
2	2	2	2	646.9711	BLADE			
			1	646.9610	BODY			
X				646.9703	CUTTER SUB ASSY			
X				646.9702	CUTTER SUB ASSY			
	X			646.9701	CUTTER SUB ASSY			
9703	9702	9701	FIND #	PART #	DESCRIPTION	MAT'L	SPEC.	

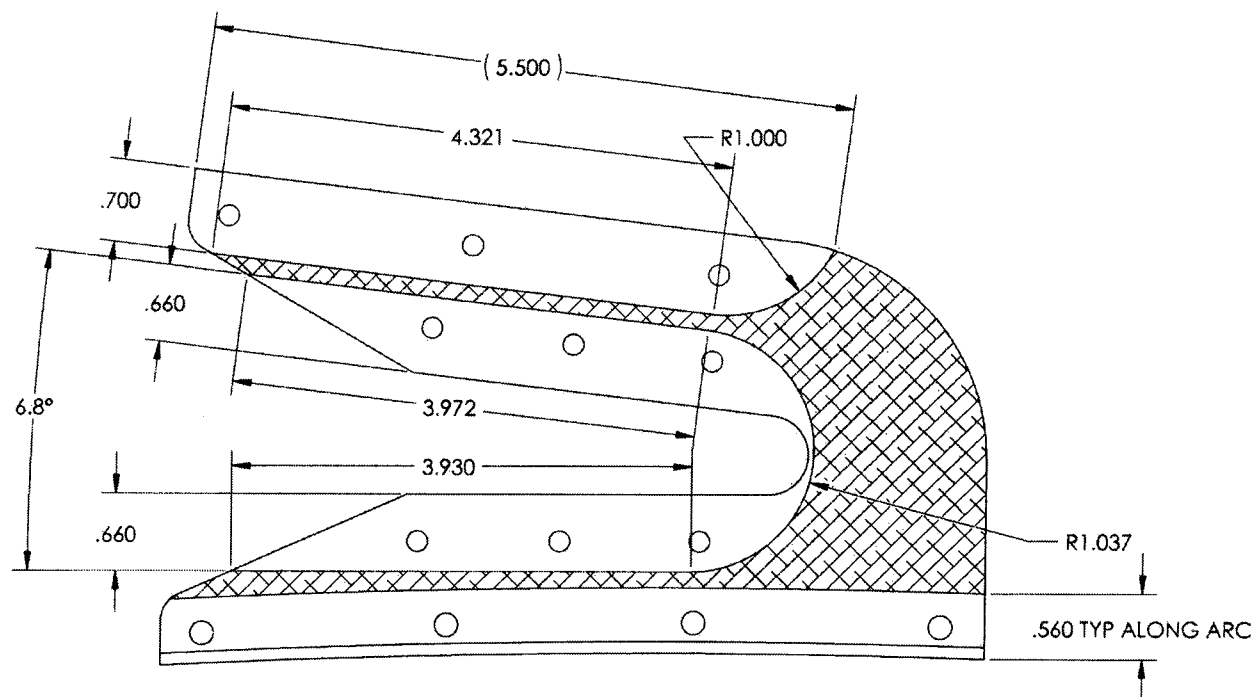
QTY		PARTS LIST	
NEXT ASSY (S)		ORIGINAL DATE 05-28-92	
646.9600		DRAWN BY CREATOR	
		P. RCHA-MO P. BRAVO	
		DRAWING APPROVAL	
		P. BRAVO	
		CONTRACT NO.	
		UNLESS OTHERWISE SPECIFIED	
		DIMENSIONS ARE IN INCHES	
		TOLERANCES ARE	
		2 PLACE DECIMALS 1.01	
		ANGLES ± .5°	
		DART 3030 ENTERPRISE CT., SUITE A VISTA, CA. 92081 (760)-724-5300	
		CUTTER SUB ASSEMBLY	
		SHEET 07M26 646.9700 REV D	
		SCALE NONE SHEET 1 OF 7	

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.



ORIGINAL DATE: 05-28-09		DART 3030 ENTERPRISE CT., SUITE A AEROSPACE VISTA, CA. 92081 APICAL INDUSTRIES, INC. (760)-724-5300 2800 DART AEROSPACE CT.	
DRAWN BY: J. MOSHAK	CHECKED: P. BRAVO		
DRAWING APPROVAL: P. BRAVO	DATE: 05-28-09		
COORDINATING NO.			
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.1°		CUTTER SUB ASSEMBLY	
SHEET: B	CAGE CODE: 07M26	DWG. NO.: 646.9700	REV. D
SCALE: NONE		SHEET: 2 OF 7	

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF AERICAL INDUSTRIES DSA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF AERICAL INDUSTRIES DSA DART AEROSPACE IS PROHIBITED.

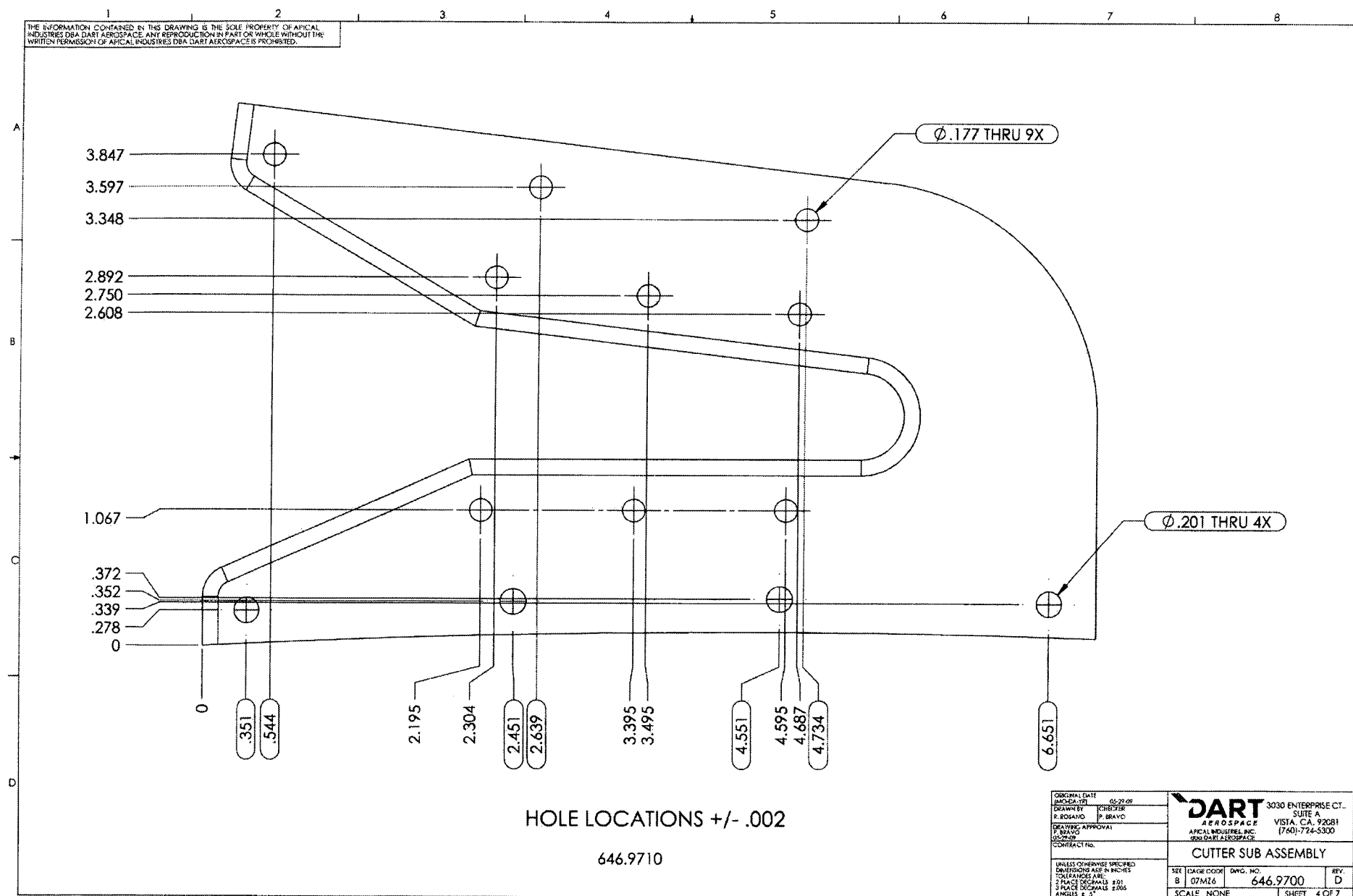


SECTION A-A $\frac{2}{C6}$

646.9710

ORIGINAL DATE 05-28-09		DART 3030 ENTERPRISE CT., SUITE A VISTA, CA. 92081 (760)-724-5300	
DRAWN BY P. ROSANO	CHECKED BY P. ROSANO	AERICAL INDUSTRIES INC. DSA DART AEROSPACE	
DESIGNED BY P. ROSANO		CUTTER SUB ASSEMBLY	
CONTRACT NO.		SHEET NO. B 07/MZ6	REV. D
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		SCALE NONE	SHEET 3 OF 7

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.



HOLE LOCATIONS +/- .002

646.9710

ORIGINAL DATE (MCHG-171)	05-22-09	 DART 3030 ENTERPRISE CT. SUITE A VISTA, CA 92081 (760)-774-5300 DART@aerospacemfg.com															
DRAWN BY	CHRISTOPHER P. BRAVO																
CHECKED BY	P. BRAVO																
DRAWING APPROVAL	P. BRAVO																
CONTRACT NO.		CUTTER SUB ASSEMBLY <table border="1"> <tr> <th>REV.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> </tr> <tr> <td>1</td> <td>07/21/06</td> <td>646.9700</td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>08/15/06</td> <td>SCALE NONE</td> <td></td> <td></td> </tr> </table>	REV.	DATE	DESCRIPTION	BY	CHKD.	1	07/21/06	646.9700			2	08/15/06	SCALE NONE		
REV.	DATE		DESCRIPTION	BY	CHKD.												
1	07/21/06		646.9700														
2	08/15/06		SCALE NONE														
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: HOLE DIMENSIONS ±.0005 ALL OTHER DIMENSIONS ±.0010 ALL SURF. FINISHES 12.000																	

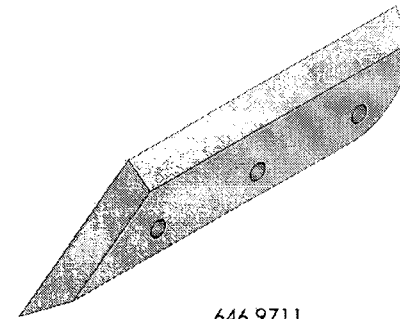
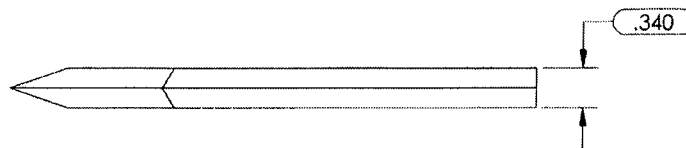
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.

A

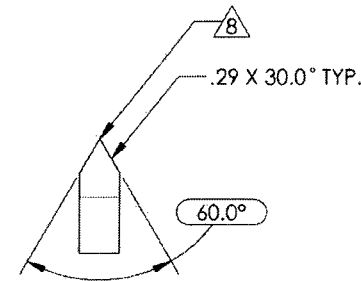
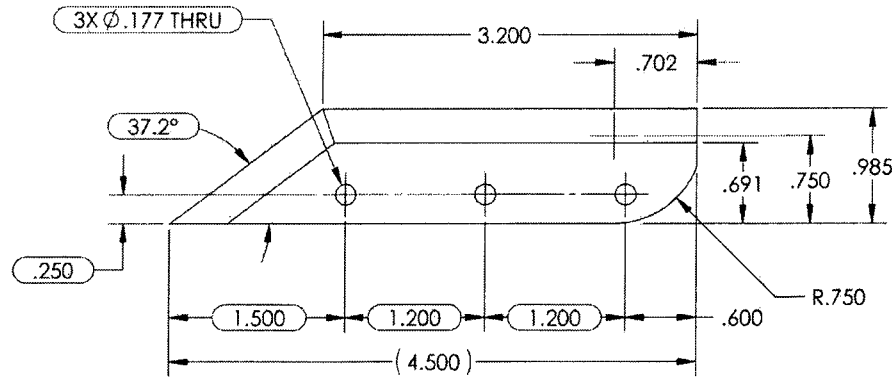
B

C

D



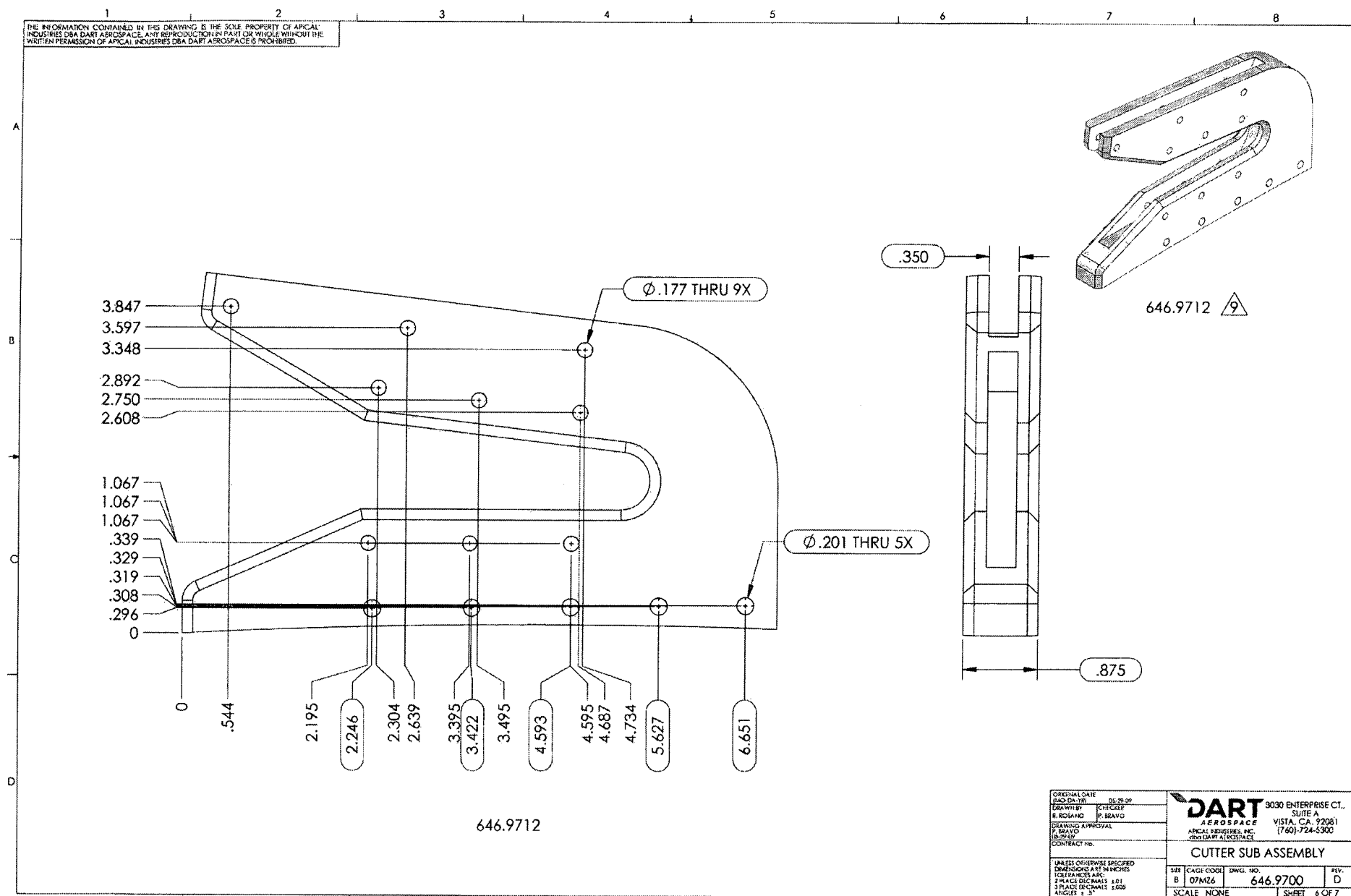
646.9711



646.9711

ORIGINAL DATE 02-27-02		3030 ENTERPRISE CT. SUITE A VISTA, CA. 92081 (760)-724-5300	
DRAWN BY S. KOSIYKO	CHECKED BY J. BRADY	DART AEROSPACE APICAL INDUSTRIES, INC. DBA DART AEROSPACE	
DRAWING APPROVAL S. KOSIYKO			
CONTRACT NO.		CUTTER SUB ASSEMBLY	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 ANGLES ±.5°		SERIAL NO. B 07ME6	DWG. NO. 646.9700 REV. D
SCALE: NONE		SHEET 5 OF 7	

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.

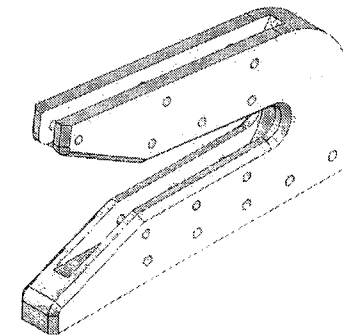


ORIGINAL DATE (DD-MY-YY)		06-28-99	
DRAWN BY B. ROSANO		CHECKED P. BEATO	
DRAWING APPROVAL P. BEATO		LIBRARY	
CONTRACT NO.			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS $\pm .01$ 3 PLACE DECIMALS $\pm .005$ ANGLES $\pm .5^\circ$			
SIZE B	CAGE CODE 07M26	DWG. NO. 646.9700	REV. D
SCALE NONE		SHEET 6 OF 7	

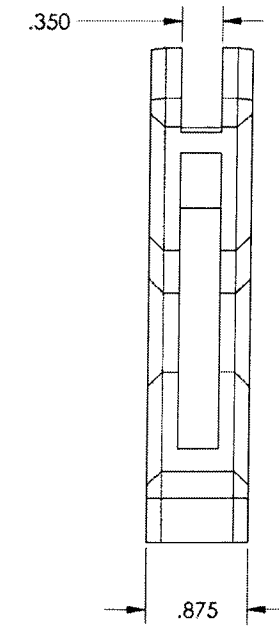
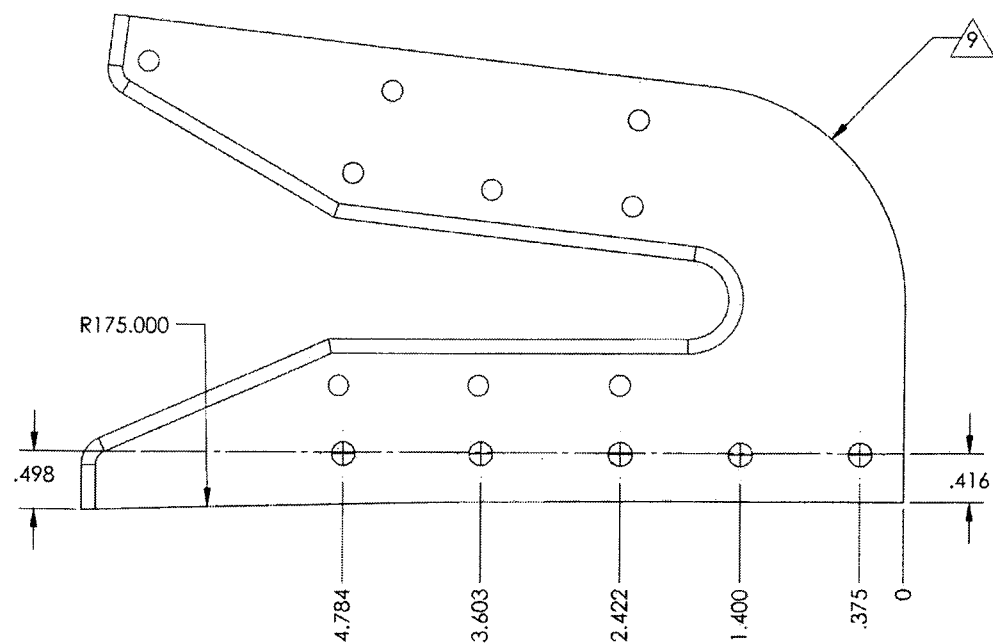
DART
AEROSPACE
3030 ENTERPRISE CT.,
SUITE A
VISTA, CA. 92081
(760)-724-5300
APICAL INDUSTRIES, INC.
(DBA DART AEROSPACE)

CUTTER SUB ASSEMBLY

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES D&A DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES D&A DART AEROSPACE IS PROHIBITED.



646.9713



ORIGINAL DATE 05-21-09	 3030 ENTERPRISE CT., SUITE A VISTA, CA. 92081 (760)-724-5300			
DRAWN BY CHIEF/DESIGNER				
DESIGNED BY P. BRAND				
DRAWING APPROVAL (Signature) 05-21-09				
CONTRACT NO.	CUTTER SUB ASSEMBLY			
UNLESS OTHERWISE SPECIFIED				
DIMENSIONS ARE IN INCHES				
TOLERANCES ARE:				
2 DECIMALS DECIMALS ±.01				
3 DECIMALS DECIMALS ±.005				
ANGLES: 1.0° 1.5° 2.0° 2.5° 3.0° 3.5° 4.0° 4.5° 5.0° 5.5° 6.0° 6.5° 7.0° 7.5° 8.0° 8.5° 9.0° 9.5° 10.0° 10.5° 11.0° 11.5° 12.0° 12.5° 13.0° 13.5° 14.0° 14.5° 15.0° 15.5° 16.0° 16.5° 17.0° 17.5° 18.0° 18.5° 19.0° 19.5° 20.0° 20.5° 21.0° 21.5° 22.0° 22.5° 23.0° 23.5° 24.0° 24.5° 25.0° 25.5° 26.0° 26.5° 27.0° 27.5° 28.0° 28.5° 29.0° 29.5° 30.0° 30.5° 31.0° 31.5° 32.0° 32.5° 33.0° 33.5° 34.0° 34.5° 35.0° 35.5° 36.0° 36.5° 37.0° 37.5° 38.0° 38.5° 39.0° 39.5° 40.0° 40.5° 41.0° 41.5° 42.0° 42.5° 43.0° 43.5° 44.0° 44.5° 45.0° 45.5° 46.0° 46.5° 47.0° 47.5° 48.0° 48.5° 49.0° 49.5° 50.0° 50.5° 51.0° 51.5° 52.0° 52.5° 53.0° 53.5° 54.0° 54.5° 55.0° 55.5° 56.0° 56.5° 57.0° 57.5° 58.0° 58.5° 59.0° 59.5° 60.0° 60.5° 61.0° 61.5° 62.0° 62.5° 63.0° 63.5° 64.0° 64.5° 65.0° 65.5° 66.0° 66.5° 67.0° 67.5° 68.0° 68.5° 69.0° 69.5° 70.0° 70.5° 71.0° 71.5° 72.0° 72.5° 73.0° 73.5° 74.0° 74.5° 75.0° 75.5° 76.0° 76.5° 77.0° 77.5° 78.0° 78.5° 79.0° 79.5° 80.0° 80.5° 81.0° 81.5° 82.0° 82.5° 83.0° 83.5° 84.0° 84.5° 85.0° 85.5° 86.0° 86.5° 87.0° 87.5° 88.0° 88.5° 89.0° 89.5° 90.0° 90.5° 91.0° 91.5° 92.0° 92.5° 93.0° 93.5° 94.0° 94.5° 95.0° 95.5° 96.0° 96.5° 97.0° 97.5° 98.0° 98.5° 99.0° 99.5° 100.0°				
REV	DATE	BY	APP	
B	07/26/06	646.9700	D	
SCALE: NONE		SHEET 7 OF 7		